

APPENDIX A: Joint Claim Construction Chart¹

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
1	<p>1. An image lens array, from object side to image side, comprising: a first lens, a second lens, and a third lens; wherein</p> <p>the first lens with positive refracting power has a front convex surface and a back concave surface, a radius of curvature of the front convex surface and that of the back concave surface of the first lens are: L1R1 and L1R2 that satisfy an equation as:</p> <p>$\square L1R1/L1R2 \square < 0.5$, the first lens is provided with aspherical</p>	'925 Patent, Claims 1 and 5	<p>The Court should construe the printing error of a box (\square) as an absolute value symbol ($$).</p> <p>Under this construction, the formulas in claim 1 will read:</p> <p>$L1R1/L1R2 < 0.5$</p> <p>$L3R1/L3R2 > 0.3^2$</p>	<p>'925 Patent at Tables 1, 2³; Abstract; 1:65-2:4; 2:54-59; 2:62-67; 3:1-7; 3:12-15; 3:56-63; 4:11-21; 4:46-54.</p> <p>'925 File History ("FH") at LAR-SAM-0000046-66; 78-83.</p>	<p>Indefinite</p> <p>Samsung object's to Largan's proposal that the Court construe "\square" as a single term. Only five claim construction terms have been allocated to Largan, but Largan here is attempting to have the Court construe six separate terms under the guise of a single entry in this chart. Those six terms</p>	<p>Samsung identifies the entirety of the specification and file history of the '925 patent, because claims 1 and 5, when "read in light of the specification delineating the patent, and the prosecution history, fail to inform, with</p>

¹ Largan served its Preliminary Election of Asserted Claims on August 29, 2014 after Samsung had completed its work on its claim construction positions. Although Samsung anticipates the number of disputes will be narrowed by Largan dropping more than 80 claims, Samsung has not had time to consider how the dropping of the claims may impact its claim construction positions. Samsung reserves the right to modify its positions after completing its review and will work with Largan to submit any necessary supplemental or revised claim construction materials. Samsung will also work with Largan after the filing of the parties' claim construction positions on August 29 in a continuing effort to narrow the disputes presented to the Court.

² The parties have agreed that the claim term "R3R1" in the following formula " $\square R3R1/L3R2 \square > 0.3$ ", should be construed as "L3R1". This agreed-upon construction appears in the Parties' Joint Claim Construction Worksheet (Appendix B).

³ Largan's citations to tables and figures are also intended to cover citations to descriptions of those tables and figures, and vice versa.

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	<p>surface;</p> <p>an aperture is arranged behind the first lens, for controlling brightness of the image lens array;</p> <p>the second lens having a front concave surface and a back convex surface, is located behind the aperture and has a negative refracting power, and the second lens is also provided with aspherical surface; and</p> <p>the third lens with a front convex surface and a back concave surface, is located behind the second lens and has a positive power, a radius of curvature of the front convex surface and that of the back concave surface of the third lens are: $L3R1$ and $L3R2$ that satisfy an equation as: $\square R3R1/L3R2\square>0.3$, the third lens is provided with aspherical</p>		<p>$1.5> f/f1 >1.0$</p> <p>$1.2> f/f2 >0.7$</p> <p>$1.2> f/f3 >0.3$</p> <p>Under this construction, the formulas in claim 5 will read:</p> <p>$1.15< d/h <2.5$</p> <p>Pursuant to P.L.R. 4.2(b), Largan states that other than Samsung's indefiniteness argument, it is not presently aware of any non-infringement or invalidity argument that hinges upon the construction of this term.</p>	<p>U.S. Patent App. Pub. No. 2007/0091471.</p> <p>U.S. Patent No. 8,767,314</p> <p>U.S. Patent App. Pub. No. 2014/0152887</p> <p>In response to Samsung's argument that multiple occurrences of a single character within a single patent claim constitutes six claim terms is blatantly inconsistent with its brand-new argument that the Court</p>	<p>are:</p> <ul style="list-style-type: none"> $\square L1R1/L1R2\square<0.5$ $\square R3R1/L3R2\square>0.3$ $1.5>\square f/f1\square>1.0$ $1.2>\square f/f2\square>0.7$ $1.2>\square f/f3\square>0.3$. $1.15<\square d/h\square<2.5$. <p>Each "$\square$" must be analyzed in the context of the term in which it occurs and that term must be independently analyzed by the Court.</p> <p>Largan further failed to identify "\square" as an independent term in either its preliminary proposed constructions (P.L.R. 4.1(a)) or its responsive proposed constructions (P.L.R. 4.1(c)). Instead, Largan waited until two days before this Joint Claim</p>	<p>reasonable certainty, those skilled in the art about the scope of the invention."</p> <p>'925 Patent at 2:54–64; 3:1–7; 3:12–15; 3:56–63; 4:10–19; 4:46–52; Tables 1, 2;⁴ Claims 1, 5.</p> <p>No alleged error is clear from the face of the patent, and consequently the file history should not be consulted as part of assessing any claim of alleged error.</p>

⁴ Samsung's citations to tables and figures are also intended to cover citations to descriptions of those tables and figures, and vice versa.

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	<p>surface;</p> <p>focal lengths of the first, second and third lenses are: f_1, f_2 and f_3, and a focal length of the image lens array is f, these four focal lengths are controlled to satisfy the following conditions:</p> <p>$1.5 > f/f_1 > 1.0$</p> <p>$1.2 > f/f_2 > 0.7$</p> <p>$1.2 > f/f_3 > 0.3$.</p> <p>5. The image lens array as claimed in claim 1, wherein a distance from the aperture to an image plane of the image lens array is d, and a image height of the image lens array is h, they satisfy the following condition:</p> <p>$1.15 < d/h < 2.5$.</p>		<p>However, Samsung has not yet provided any substantive response to Largan's discovery requests seeking its non-infringement positions.</p>	<p>should construe nine preambles from seven different patents as one claim term.</p> <p>Moreover, Samsung's argument that this claim term was not properly disclosed in advance is plainly incorrect. Although Largan initially proposed longer portions of the claim language for construction (whole formulas that</p>	<p>Construction Statement was due to argue for the first time that "□" should be construed. The patent local rules are designed to prohibit such dilatory tactics, particularly when they violate the Court's limits on the numbers of disputed terms.</p> <p>Nonetheless, in the event that the Court considers these six terms ("$L1R1/L1R2 < 0.5$"; "$R3R1/L3R2 > 0.3$"; "$1.5 > f/f_1 > 1.0$"; "$1.2 > f/f_2 > 0.7$"; "$1.2 > f/f_3 > 0.3$"; "$1.15 < d/h < 2.5$"), they are indefinite. Each term, viewed in light of the specification and prosecution history, fails to inform those</p>	<p>However, if it becomes relevant, Samsung identifies in addition to the citations to the specification listed above, the following specific file history citations:</p> <p>As-filed application filed 10/18/2005; May 14, 2007 Response to Office Action; Notice of Allowability.</p> <p>Samsung objects to Largan's purported reliance on U.S.</p>

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				included the boxes), both parties shortened claim terms with an aim for narrowing the disputed issues before the Court. For example, less than 12 hours ago, Samsung deleted language from its proposed term "the [second / third] lens element . . . [has /having] . . . at least one inflection point formed on the object-side and image-side surfaces," which now	skilled in the art about the scope of the invention with reasonable certainty. <i>Nautilus, Inc. v. Biosig Instruments, Inc.</i> , 572 U.S. ___, slip op. at 11 (2014). Further, Plaintiff's proposed construction impermissibly reads different meaning into the claim. Largan's construction is an inappropriate attempt to use this Court to correct the '925 Patent. These terms are not amenable to judicial correction because they do not satisfy the Federal Circuit's requirements for judicial correction. <i>Group One, Ltd. v. Hallmark Cards, Inc.</i> , 407 F.3d	Patent App. Pub. No. 2007/0091471. Contrary to the requirements of L.P.R. 4.1(a) and 4.1(c), Largan first disclosed these references less than 12 hours before this filing was due to the Court. Largan also has not produced a copy of this reference as required by L.P.R. 4.1(b) and 4.1(d).

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				<p>reads: "at least one inflection point formed on the object-side and image-side surfaces."</p> <p>Narrowing claim terms is in the best interest of the parties and the Court.</p> <p>Samsung has no grounds to complain about Largan narrowing its proposals, particularly because it did so itself less than 12 hours ago.</p>	<p>1297, 1303 (Fed. Cir. 2005); Novo Indus., L.P. v. Micro Molds Corp., 350 F.3d 1348, 1352–53 (Fed. Cir. 2003).</p> <p>Pursuant to P.L.R. 4.2(b), Samsung states that the construction of this claim term may impact its non-infringement or invalidity arguments. However, Largan has not served proper infringement contentions or any substantive response to Samsung's discovery request seeking its validity positions.</p>	
2	9. The optical system for taking image as claimed in claim 4, wherein a tangential angle ANG32 at a position of an effective diameter of a rear	'602 Patent, Claim 9	Claim 9 of the '602 Patent is no longer asserted pursuant to Largan's	Claim 9 of the '602 Patent is no longer asserted pursuant to	Indefinite This term, viewed in light of the specification and	Samsung identifies the entirety of the specification and file history

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	surface of the third lens element satisfies the relation: ANG32←30 deg.		Preliminary Election of Asserted Claims, which was due and served today.	Largan's Preliminary Election of Asserted Claims, which was due and served today.	<p>prosecution history, fails to inform those skilled in the art about the scope of the invention with reasonable certainty. <i>Nautilus, Inc. v. Biosig Instruments, Inc.</i>, 572 U.S. ____, slip op. at 11 (2014).</p> <p>Further, Plaintiff's proposed construction impermissibly reads different meaning into the claim. To the extent Largan contends the construction is intended to correct an alleged error in the claims, Largan's construction is an inappropriate attempt to use this Court to correct the '602 Patent. This term is not amenable to judicial correction because it</p>	<p>of the '602 patent, because claim 9, when "read in light of the specification delineating the patent, and the prosecution history, fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention."</p> <p>'602 Patent at 4:1–5, Claim 9.</p> <p>No alleged error is clear from the face of the patent, and consequently the file history should not be consulted as part of</p>

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					<p>does not satisfy the Federal Circuit's requirements for judicial correction. <i>Group One, Ltd. v. Hallmark Cards, Inc.</i>, 407 F.3d 1297, 1303 (Fed. Cir. 2005); <i>Novo Indus., L.P. v. Micro Molds Corp.</i>, 350 F.3d 1348, 1352–53 (Fed. Cir. 2003).</p> <p>Pursuant to P.L.R. 4.2(b), Samsung states that the construction of this claim term may impact its non-infringement or invalidity arguments. However, Largan has not served proper infringement contentions or any substantive response to Samsung's discovery request seeking its validity positions.</p>	<p>assessing any claim of alleged error. However, if it becomes relevant, Samsung identifies in addition to the citations to the specification listed above, the following specific file history citations:</p> <p>As-filed application filed 12/25/2006.</p>

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
3	18. The optical lens system according to claim 17, wherein the fourth lens element has a concave image-side surface and a convex image-side surface , at least one of the object-side and image-side surfaces of the fourth lens element is aspheric, and the fifth lens element is made of plastic.	'860 Patent, Claim 18	Claim 18 of the '860 Patent is no longer asserted pursuant to Largan's Preliminary Election of Asserted Claims, which was due and served today.	Claim 18 of the '860 Patent is no longer asserted pursuant to Largan's Preliminary Election of Asserted Claims, which was due and served today.	Indefinite This term, viewed in light of the specification and prosecution history, fail to inform those skilled in the art about the scope of the invention with reasonable certainty. <i>Nautilus, Inc. v. Biosig Instruments, Inc.</i> , 572 U.S. ____, slip op. at 11 (2014). Further, Plaintiff's proposed construction impermissibly reads different meaning into the claim. To the extent Largan contends the construction is intended to correct an alleged error in the claims, Largan's construction is an inappropriate attempt	Samsung identifies the entirety of the specification and file history of the '860 patent, because claim 18, when "read in light of the specification delineating the patent, and the prosecution history, fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention." '860 Patent at Abstract, 1:51–2:26, 2:40–42, 3:5–7, 4:42–52, 5:4–10, 5:41–60, 6:32–7:64, 8:21–51, 10:6–

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					<p>to use this Court to correct the '860 Patent. This term is not amenable to judicial correction because it does not satisfy the Federal Circuit's requirements for judicial correction. <i>Group One, Ltd. v. Hallmark Cards, Inc.</i>, 407 F.3d 1297, 1303 (Fed. Cir. 2005); <i>Novo Indus., L.P. v. Micro Molds Corp.</i>, 350 F.3d 1348, 1352–53 (Fed. Cir. 2003).</p> <p>Pursuant to P.L.R. 4.2(b), Samsung states that the construction of this claim term may impact its non-infringement or invalidity arguments. However, Largan has not served proper infringement contentions or any</p>	<p>37, 11:46–12:9, 13:18–48, 14:57–20, 16:28–58, 17:66–18:29, Figures 1A, 2A, 3A, 4A, 5A, 6A, 7A, 8–22, and claims 1, 17, & 18,</p> <p>No alleged error is clear from the face of the patent, and consequently the file history should not be consulted as part of assessing any claim of alleged error. However, if it becomes relevant, Samsung identifies in addition to the citations to the</p>

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					substantive response to Samsung's discovery request seeking its validity positions.	specification listed above, the following specific file history citations: As-filed application dated 11/22/2011, and the notice of allowability and reasons for allowance dated 6/24/2013.
4	<p>21. An imaging lens system including, in order from an object side to an image side:</p> <p>a first lens element with positive refractive power having a convex object-side surface;</p> <p>a second lens element;</p> <p>a third lens element;</p>	'190 Patent, Claim 21	<p>$-1.5 < f_4/f_5 \leq -0.79$</p> <p>Pursuant to P.L.R. 4.2(b), Largan states that it is not presently aware of any non-infringement or invalidity argument that hinges upon the construction of</p>	<p>'190 Patent at Table 7, Fig. 13; 3:12-13; 4:20-25; 6:3-8; 7:61-64; 9:26-29; 10:60-63; 11:43-45.</p> <p>'190 FH at LAR-SAM-000001373-1415; 1438-</p>	<p>Plain and ordinary meaning, <i>i.e.</i>, "$-1.5 < f_4/f_5 \leq 0.79$"</p> <p>Plaintiff's proposed construction impermissibly reads different meaning into the claim. To the extent Largan contends the construction is intended to correct an</p>	<p>'190 Patent at 3:67-43, 4:20-6:38, 7:61-8:10, 9:26-42, 10:60-11:9, 11:41-45, Figures 7-12, and Claims 1, 13, & 21.</p> <p>No alleged error is clear</p>

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	<p>a fourth lens element with positive refractive power having a convex image-side surface; and</p> <p>a fifth lens element with negative refractive power having a convex object-side surface and a concave image-side surface, the object-side and image-side surfaces thereof being aspheric, at least one surface thereof being provided with at least one inflection point;</p> <p>wherein the lens elements with refractive power in the imaging lens system are only the first, second, third, fourth and fifth lens elements; a focal length of the fourth lens element is f_4, a focal length of the fifth lens element is f_5, and they satisfy the relation: - $1.5 < f_4/f_5 \leq 0.79$.</p>		<p>this term. However, Samsung has not yet provided any substantive response to Largan's discovery requests seeking its non-infringement positions.</p>	<p>1450.</p>	<p>alleged error in the claims, Largan's construction is an inappropriate attempt to use this Court to correct the '190 Patent. This term is not amenable to judicial correction because it does not satisfy the Federal Circuit's requirements for judicial correction. <i>Group One</i>, 407 F.3d at 1303; <i>Novo</i>, 350 F.3d at 1352-53.</p> <p>Pursuant to P.L.R. 4.2(b), Samsung states that the construction of this claim term may impact its non-infringement or invalidity arguments. However, Largan has not served proper infringement contentions or any substantive response to</p>	<p>from the face of the patent, and consequently the file history should not be consulted as part of assessing any claim of alleged error. However, if it becomes relevant, Samsung identifies in addition to the citations to the specification listed above, the following specific file history citations:</p> <p>As-filed application dated 3/21/2013, the examiner's non-final</p>

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					Samsung's discovery request seeking its validity positions.	rejection dated 8/22/2013, the amendment and arguments dated 10/21/2013, and the notice of allowability and reasons for allowance dated 1/14/2014.
5	<p><u>'602 Patent</u></p> <p>1. An optical system for taking image comprising three lens elements with refractive power, from the object side to the image side:</p> <p>a first lens element with positive refractive power having a convex front surface and a concave rear surface, the front surface of the first lens being aspheric;</p> <p>a plastic second lens element with negative refractive power having a concave front surface and a convex rear surface, the front surface and the rear surface of the</p>	<p>'602 Patent, Claim 1</p> <p>'747 Patent, Claims 7 and 8</p> <p>'807 Patent, Claims 1 and 20</p> <p>'291 Patent, Claims 1 and 16</p>	<p>Samsung's proposal that the Court construe the preambles of the independent claims as limiting is not properly before the Court. First, Samsung's proposal vastly exceeds the Court's limit of 10 disputed claim terms because there is no one preamble. Rather, each independent claim in each of</p>	<p>Because Samsung identified this multitude of terms for the first time on the day this filing was due in violation of the Patent Local Rules, Largan has not yet had an opportunity to identify the intrinsic or extrinsic evidence upon</p>	<p>The preambles of the independent claims in the '602, '747, '807, '291, '860, '190, and '191 Patents are limiting because they recite essential structure or steps and/or are necessary to give "life, meaning, and vitality" to the claims. <i>See, e.g., Catalina Mktg., Int'l v. Coolsavings.com</i>, 289 F.3d 801, 808 (Fed. Cir. 2002).</p> <p>Largan has been on</p>	<p>'602 Patent at Abstract; Figures 1, 3; 1:21-31; 1:41-58; 5:12-44; 7:37-67; Tables 1, 3; Claim 1.</p> <p>'747 Patent at Abstract; 1:40-2:12; 2:30-4:67; 5:41-6:5; 6:23-8:4; 9:1-27; 9:35-10:45; 11:35-60; 12:35-13:35; Figures 1, 3, & 5, Tables 1-7,</p>

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	<p>second lens being aspheric;</p> <p>a plastic third lens element with positive refractive power having a convex front surface and a concave rear surface, the front surface and the rear surface of the third lens being aspheric; and</p> <p>an aperture stop located between the first lens element and the second lens element for controlling brightness of the optical system;</p> <p>wherein a focal length of the first lens element is f_1, a focal length of the second lens element is f_2, a focal length of the optical system is f, and they satisfy the relations: $f/f_1 > 0.95$, $f/f_2 > 0.34$.</p> <p><u>'747 Patent</u></p> <p>7. A thin type optical lens system for taking image comprising three lens elements with refractive power, from the object side to the image side:</p>	<p>'860 Patent, Claim 1 and 17</p> <p>'190 Patent, Claims 1 and 21</p> <p>'191 Patent, Claims 1, 12, and 22</p>	<p>the patents-in-suit has a different preamble. Moreover, each preamble consists of multiple different terms, each of which must be analyzed separately for whether or not it is a limitation. Moreover, the fact that Samsung's proposal to construe all of the preambles exceeds the Court's limit on the number of disputed claim terms is particularly true given that Samsung is only permitted to choose half of the 10 disputed terms.</p>	<p>which it may rely. At a minimum, Largan anticipates relying upon the claims in which each preamble is found.</p>	<p>notice that Samsung believes the preambles of the independent claims in the '602, '747, '807, '291, '860, '190, and '191 Patents are limiting. On August 1, 2014, Samsung identified "thin type," found in the preambles of claims 7 and 8 of the '747 Patent, as a term requiring construction. Samsung further disclosed Samsung's view that these preambles are limiting to Largan during a meet-and-confer on August 25, 2014. Samsung again confirmed Samsung's view that the preambles are limiting during a follow-up meet-and-confer on August 27, 2014.</p>	<p>Claims 1–8.</p> <p>'807 Patent at Abstract; 1:50–2:63; 3:11–24; 4:15–55; 4:60–5:50; 5:59–6:27; 6:32–7:42; 7:51–59; 8:16–38; 8:64–9:36; 9:55–10:13; 10:27–67; 11:19–43; 11:57–12:29; 12:48–13:5; 13:20–60; 14:12–36; 14:50–15:23; 15:42–67; 16:14–54; Figures 1, 3, 5, 7, 9, 11, 13–25, Claims 1–23.</p> <p>'291 Patent at Abstract, 1:46–2:67, 3:52–57, 4:64:5:5, 6:11–19, 6:55–60, 7:10–16, 8:19–</p>

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	<p>a first plastic lens element with positive refractive power having a convex aspheric object-side surface and a convex aspheric image-side surface;</p> <p>an aperture stop;</p> <p>a second plastic lens element with negative refractive power having a concave aspheric object-side surface and a convex aspheric image-side surface;</p> <p>a third plastic lens element with negative refractive power having a convex aspheric object-side surface and a concave aspheric image-side surface, and the third lens element being formed with at least one inflection point;</p> <p>wherein an Abbe number of the first lens element is V1, an Abbe number of the second lens element is V2, an Abbe number of the third lens element is V3 and they satisfy the relation:</p>		<p>Second, Samsung failed to identify any preamble in either its preliminary proposed constructions (Patent L.R. 4.1.a) or its responsive proposed constructions (Patent L.R. 4.1.c). Instead, Samsung waited until the day this Joint Claim Construction Statement was due to argue for the first time that all preambles should be construed. The patent local rules are designed to prohibit such dilatory tactics, particularly when they violate the</p>		<p>Pursuant to P.L.R. 4.2(b), Samsung states that the construction of this claim term may impact its non-infringement or invalidity arguments. However, Largan has not served proper infringement contentions or any substantive response to Samsung's discovery request seeking its validity positions.</p>	<p>39, 8:55–10:11, 11:14–20, 13:42–47, 17:5–11, 19:39–45, 22:61–67, 25:26–32, 27:53–60, Figures 1, 5, 7, 9, 11, 13, 15, & 17, Tables 1–17, and Claims 1 & 16.</p> <p>'291 File History: as-filed application dated 3/18/2011, and the notice of allowability and reasons for allowance dated 8/6/2012.</p> <p>'860 Patent at Abstract, 1:16–18, 1:51–3:42,</p>

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	<p>$(V1+V3)/2-V2>20$</p> <p>a tangential angle of an image-side surface of the third lens element at a position of its effective optical diameter is ANG32, and it satisfies the relation:</p> <p>ANG32<-10 deg.</p> <p>8. A thin type optical lens system for taking image comprising three lens elements with refractive power, from the object side to the image side:</p> <p>a first plastic lens element with positive refractive power having a convex aspheric object-side surface and a convex aspheric image-side surface;</p> <p>an aperture stop;</p> <p>a second plastic lens element with negative refractive power having a concave aspheric object-side surface and a convex aspheric</p>		<p>Court's limits on the numbers of disputed terms.</p> <p>In the event the Court considers Samsung's proposal as a single "term," Largan states that the preambles are not limiting. However, for the reasons discussed above, these are neither one term nor should Samsung be permitted to introduce this argument on the day of filing.</p> <p>Pursuant to P.L.R. 4.2(b), Largan states that it is not presently aware of any non-infringement or invalidity</p>			<p>4:42-61, 5:56-6:6, 6:16-53, 7:41-64, 9:23-37, 9:56-67, 10:63-11:10, 11:29-40, 12:35-49, 13:1-12, 14:40-51, 15:45-59, 16:11-22, 17:16-30, 17:49-60, 18:55-19:2, Figures 1A, 2A, 3A, 4A, 5A, 6A, 7A, 8-22, and Claims 1 & 17.</p> <p>'860 File History: as-filed application dated 11/22/2011, and the notice of allowability and reasons for</p>

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>image-side surface;</p> <p>a third plastic lens element with negative refractive power having a convex aspheric object-side surface and a concave aspheric image-side surface, and the third lens element being formed with at least one inflection point;</p> <p>wherein a height of the object-side surface of the third lens element at a position of its effective diameter is SAG31, and it satisfies the relation:</p> <p>$SAG31 < 0.2 \text{ mm}$.</p> <p><u>'807 Patent</u></p> <p>1. An imaging lens assembly comprising, in order from an object side to an image side:</p> <p>a first lens element with positive refractive power having a convex object-side surface and a convex image-side surface;</p> <p>a second lens element with</p>		<p>argument that hinges upon the construction of this term, making Samsung's last-minute insistence on construing these terms even more odd. However, Samsung has not yet provided any substantive response to Largan's discovery requests seeking its non-infringement positions.</p>			<p>allowance dated 6/24/2013.</p> <p>'190 Patent at Abstract, 1:46–59, 2:24–38, 3:18–31, 3:58–63, 4:43–55, 5:3–18, 5:44–49, 6:26–38, 6:58–7:22, 8:15–22, 8:36–67, 9:48–55, 10:3–34, 11:14–21, Figures 1, 3, 5, & 7–13, and Claims 1, & 21.</p> <p>'190 File History: as-filed application dated 3/21/2013, the examiner's non-final rejection dated 8/22/2013, the</p>

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>negative refractive power, at least one of the object-side and image-side surfaces thereof being aspheric; and</p> <p>a third lens element with negative refractive power having a concave image-side surface, both of the object-side and image-side surfaces thereof being aspheric; and wherein the imaging lens assembly further comprises an aperture stop disposed between the first lens element and the second lens element, and an electronic sensor for image formation; wherein there are three lens elements with refractive power; and wherein a focal length of the imaging lens assembly is f, a focal length of the second lens element is f_2, a radius of curvature of the object-side surface of the first lens element is R_1, a radius of curvature of the image-side surface of the first lens element is R_2, a radius of curvature of the object-side surface of the second lens element is R_3, a distance on the optical</p>					<p>amendment and arguments dated 10/21/2013, and the notice of allowability and reasons for allowance dated 1/14/2014.</p> <p>'191 Patent at Abstract, 1:46–59, 2:24–38, 3:18–31, 3:58–63, 4:43–55, 5:3–18, 5:44–49, 6:26–38, 6:58–7:22, 8:12–19, 8:33–64, 9:42–49, 9:64–10:28, 11:5–12, Figures 1, 3, 5, & 7–13, Claims 1, 12, & 22.</p> <p>'191 File History: the application dated 5/9/2013,</p>

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>axis between the aperture stop and the electronic sensor is SL, a distance on the optical axis between the object-side surface of the first lens element and the electronic sensor is TTL, and they satisfy the following relations:</p> <p>$-0.70 < f/f_2 < -0.24$;</p> <p>$-0.30 < R_1/R_2 < 0.00$;</p> <p>$-0.40 < R_3/f < -0.24$;</p> <p>$0.75 < SL/TTL < 0.90$.</p> <p>20. An imaging lens assembly comprising, in order from an object side to an image side:</p> <p>a first lens element with positive refractive power having a convex object-side surface and a convex image-side surface;</p> <p>a second lens element with negative refractive power having a concave object-side surface and a convex image-side surface, at least one of the object-side and</p>					<p>the examiner's non-final rejection dated 9/9/2013, the amendment and arguments dated 11/18/2013, and the notice of allowability and reasons for allowance dated 1/13/2014.</p>

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>the image-side surfaces thereof being aspheric; and</p> <p>a third lens element with negative refractive power having a concave image-side surface, both of the object-side and image-side surfaces thereof being aspheric, at least one inflection point formed on the object-side and image-side surfaces; and wherein the imaging lens assembly further comprises an aperture stop disposed between the first lens element and the second lens element, and an electronic sensor for image formation; wherein there are three lens elements with refractive power; and wherein a focal length of the imaging lens assembly is f, a focal length of the second lens element is f_2, a radius of curvature of the object-side surface of the first lens element is R_1, a radius of curvature of the image-side surface of the first lens element is R_2, an Abbe number of the first lens element is V_1, an Abbe number of the second lens element is V_2, a</p>					

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>distance on the optical axis between the aperture stop and the electronic sensor is SL, a distance on the optical axis between the object-side surface of the first lens element and the electronic sensor is TTL, and they satisfy the following relations:</p> <p>$-0.70 < f/f_2 < -0.24$;</p> <p>$-0.30 < R_1/R_2 < 0.00$;</p> <p>$31.0 < V_1 - V_2 < 45.0$;</p> <p>$0.75 < SL/TTL < 0.90$.</p> <p><u>'291 Patent</u></p> <p>1. A photographing optical lens assembly comprising, in order from an object side to an image side:</p> <p>a first lens element with positive refractive power having a convex object-side surface;</p> <p>a second lens element with</p>					

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>negative refractive power;</p> <p>a third lens element;</p> <p>a fourth lens element; and</p> <p>a fifth lens element having a concave image-side surface and made of plastic material, wherein the fifth lens element has at least one inflection point formed on at least one of the object-side surface and the image-side surface thereof;</p> <p>wherein a focal length of the photographing optical lens assembly is f, a focal length of the first lens element is f_1; the photographing optical lens assembly further comprises an aperture stop and an image sensor, wherein a distance on the optical axis between the aperture stop and the image plane is SL; a distance on the optical axis between the object-side surface of the first lens element and the image plane is TTL, when the incident angle θ_1 of the light is 36</p>					

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>degrees and the light passes through the center of the aperture stop, the vertical distance from the optical axis to the intersection point of the light and the image-side surface of the fifth lens element is Y_{c1}, the image sensor is located on the image plane, a half of a diagonal length of an effective pixel area of the image sensor is $ImgH$, and they satisfy the following relationships:</p> <p>$0.7 < f/f_1 < 2.0$;</p> <p>$0.7 < SL/TTL < 1.2$;</p> <p>and</p> <p>$0.3 < Y_{c1}/ImgH < 0.9$.</p> <p>16. A photographing optical lens assembly comprising, in order from an object side to an image side:</p> <p>to a first lens element with positive refractive power having a convex object-side surface;</p>					

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>a second lens element with negative refractive power;</p> <p>a third lens element;</p> <p>a fourth lens element with positive refractive power, wherein at least one surface of the fourth lens element is aspheric;</p> <p>a fifth lens element with negative refractive power having a concave image-side surface, wherein at least one surface of the fifth lens element is aspheric;</p> <p>wherein a radius of curvature of the object-side surface of the fifth lens element is R9, a radius of curvature of the image-side surface of the fifth lens element is R10; the photographing optical lens assembly further comprises an aperture stop and an image sensor, wherein a distance on the optical axis between the aperture stop and the image plane is SL, a distance on the optical axis between the object-side surface of the first lens element and the</p>					

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>image plane is TTL, when the incident angle θ_1 of the light is 36 degrees and the light passes through the center of the aperture stop, the vertical distance from the optical axis to the intersection point of the light and the image-side surface of the fifth lens element is Y_{c1}, the image sensor is located on the image plane, a half of a diagonal length of an effective pixel area of the image sensor is $ImgH$, and they satisfy the following relationships:</p> <p>$-5 < R_{10}/R_9 < 5$;</p> <p>$0.7 < SL/TTL < 1.2$;</p> <p>and</p> <p>$0.3 < Y_{c1}/ImgH < 0.9$.</p> <p><u>'860 Patent</u></p> <p>1. An optical lens system comprising, in order from an object side to an image side:</p> <p>a first lens element with positive</p>					

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>refractive power having a convex object-side surface;</p> <p>a second lens element with negative refractive power;</p> <p>a third lens element with positive refractive power having a convex object-side surface and a convex image-side surface;</p> <p>a fourth lens element; and</p> <p>a fifth lens element having a convex object-side surface and a concave image-side surface, the object-side and image-side surfaces thereof being aspheric and at least one inflection point being formed on the image-side surface,</p> <p>wherein the optical lens system is further provided with a stop disposed between an object and the third lens element, and an electronic sensor disposed at an image plane for the image formation of the object; a focal length of the optical lens system</p>					

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>is f; a focal length of the third lens element is f_3; a distance on an optical axis between the stop and the electronic sensor is SL; a distance on the optical axis between the object-side surface of the first lens element and the electronic sensor is TTL; and they satisfy the following relations:</p> <p>$0.00 < f/f_3 < 1.90$, and</p> <p>$0.7 < SL/TTL < 1.2$.</p> <p>17. An optical lens system comprising, in order from an object side to an image side:</p> <p>a first lens element with positive refractive power having a convex object-side surface;</p> <p>a second lens element with negative refractive power;</p> <p>a third lens element with positive refractive power having a convex object-side surface and a convex image-side surface;</p>					

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>a fourth lens element with positive refractive power; and</p> <p>a fifth lens element with negative refractive power having a convex object-side surface and a concave image-side surface, both of the object-side and image-side surfaces thereof being aspheric and at least one inflection point being formed on the image-side surface,</p> <p>wherein the optical lens system is further provided with a stop disposed between an object and the third lens element, and an electronic sensor disposed at an image plane for the image formation of the object; a focal length of the optical lens system is f; a focal length of the first lens element is f_1; a distance on an optical axis between the stop and the electronic sensor is SL; a distance on the optical axis between the object-side surface of the first lens element and the electronic sensor is TTL; and they</p>					

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	<p>satisfy the following relations:</p> <p>$1.00 < f/f_1 < 2.30$, and</p> <p>$0.7 < SL/TTL < 1.2$.</p> <p><u>'190 Patent</u></p> <p>1. An imaging lens system including, in order from an object side to an image side:</p> <p>a first lens element with positive refractive power having a convex object-side surface;</p> <p>a second lens element with negative refractive power;</p> <p>a third lens element;</p> <p>a fourth lens element with positive refractive power having a convex image-side surface; and</p> <p>a fifth lens element with negative refractive power having a convex object-side surface and a concave image-side surface, the object-side and image-side surfaces</p>					

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>thereof being aspheric, at least one surface thereof being provided with at least one inflection point;</p> <p>wherein the lens elements with refractive power in the imaging lens system are only the first, second, third, fourth and fifth lens elements; a focal length of the fourth lens element is f_4, a focal length of the fifth lens element is f_5, and they satisfy the relation: $-1.5 < f_4/f_5 < -0.5$.</p> <p>21. An imaging lens system including, in order from an object side to an image side:</p> <p>a first lens element with positive refractive power having a convex object-side surface;</p> <p>a second lens element;</p> <p>a third lens element;</p> <p>a fourth lens element with positive refractive power having a</p>					

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>convex image-side surface; and</p> <p>a fifth lens element with negative refractive power having a convex object-side surface and a concave image-side surface, the object-side and image-side surfaces thereof being aspheric, at least one surface thereof being provided with at least one inflection point;</p> <p>wherein the lens elements with refractive power in the imaging lens system are only the first, second, third, fourth and fifth lens elements; a focal length of the fourth lens element is f_4, a focal length of the fifth lens element is f_5, and they satisfy the relation: $-1.5 < f_4/f_5 \leq 0.79$.</p> <p><u>'191 Patent</u></p> <p>1. An imaging lens system including, in order from an object side to an image side:</p> <p>a first lens element with positive refractive power having a convex</p>					

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>object-side surface;</p> <p>a second lens element with negative refractive power having a convex object-side surface and a concave image-side surface;</p> <p>a third lens element;</p> <p>a fourth lens element having a concave object-side surface and a convex image-side surface; and</p> <p>a fifth lens element with negative refractive power having an object-side surface and a concave image-side surface, the object-side and image-side surfaces thereof being aspheric, at least one surface thereof being provided with at least one inflection point;</p> <p>wherein the lens elements with refractive power in the imaging lens system are only the first, second, third, fourth and fifth lens elements; an Abbe number of the first lens element is V1, an Abbe number of the second lens</p>					

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>element is V2, and the following relation is satisfied: $V1 - V2 > 20$.</p> <p>12. An imaging lens system including, in order from an object side to an image side:</p> <p>a first lens element with positive refractive power having a convex object-side surface;</p> <p>a second lens element with negative refractive power having a convex object-side surface and a concave image-side surface;</p> <p>a third lens element;</p> <p>a fourth lens element having a concave object-side surface and a convex image-side surface; and</p> <p>a fifth lens element having an object-side surface and a concave image-side surface, the object-side and image-side surfaces thereof being aspheric, at least one surface thereof being provided with at least one</p>					

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>inflection point;</p> <p>wherein the lens elements with refractive power in the imaging lens system are only the first, second, third, fourth and fifth lens elements.</p> <p>22. An imaging lens system including, in order from an object side to an image side:</p> <p>a first lens element with positive refractive power having a convex object-side surface;</p> <p>a second lens element with negative refractive power having a convex object-side surface and a concave image-side surface;</p> <p>a third lens element;</p> <p>a fourth lens element having a convex image-side surface; and</p> <p>a fifth lens element having an object-side surface and a concave image-side surface, the object-side and image-side surfaces</p>					

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	thereof being aspheric, at least one surface thereof being provided with at least one inflection point; wherein the lens elements with refractive power in the imaging lens system are only the first, second, third, fourth and fifth lens elements; a focal length of the fourth lens element is f_4 , a focal length of the fifth lens element is f_5 , and the following relation is satisfied: $-1.5 < f_4/f_5 < -0.5$.					
6	<p><u>'602 Patent</u></p> <p>1. An optical system for taking image comprising three lens elements with refractive power, from the object side to the image side:</p> <p>a first lens element with positive refractive power having a convex front surface and a concave rear surface, the front surface of the first lens being aspheric;</p> <p>a plastic second lens element with negative refractive power</p>	<p>'602 Patent, Claims 1 and 2</p> <p>'747 Patent, Claims 7 and 8</p> <p>'807 Patent, Claims 2 and 22</p> <p>'291</p>	<p>This term needs no construction and should be given its plain and ordinary meaning.</p> <p>Pursuant to P.L.R. 4.2(b), Largan states that it is not presently aware of any non-infringement or invalidity argument that hinges upon the construction of</p>	<p>'602 Patent: Abstract; Tables 1, 3; 1:47-55, 2:38-44, 3:11-14, 5:20-33, 7:45-57</p> <p>'807 Patent: Tables 1, 3, 5, 7, 9, 11; 4:67-5:3, 7:47-50, 7:60-8:4</p> <p>'860 Patent: Tables 1, 3, 5,</p>	<p>"synthetic material distinct from glass"</p> <p>Pursuant to P.L.R. 4.2(b), Samsung states that the construction of this claim term may impact its non-infringement or invalidity arguments. However, Largan has not served proper infringement contentions or any substantive response to Samsung's discovery</p>	<p>'602 Patent at 2:33-44.</p> <p>'747 Patent at 2:19-30; 3:60-4:10; 5:51-65; 9:10-25; 11:44-58; Tables 1-7, Claims 1, 5-8.</p> <p>'747 File History: the certified copy of foreign priority</p>

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>having a concave front surface and a convex rear surface, the front surface and the rear surface of the second lens being aspheric;</p> <p>a plastic third lens element with positive refractive power having a convex front surface and a concave rear surface, the front surface and the rear surface of the third lens being aspheric; and</p> <p>an aperture stop located between the first lens element and the second lens element for controlling brightness of the optical system;</p> <p>wherein a focal length of the first lens element is f_1, a focal length of the second lens element is f_2, a focal length of the optical system is f, and they satisfy the relations: $f/f_1 > 0.95$, $f/f_2 > 0.34$.</p> <p>2. The optical system for taking image as claimed in claim 1, wherein the first lens element is made of plastic material, the rear surface of the first lens element is</p>	<p>Patent, Claims 1 and 3</p> <p>'860 Patent, Claims 2 and 18</p>	<p>this term. However, Samsung has not yet provided any substantive response to Largan's discovery requests seeking its non-infringement positions.</p>	<p>7, 9, 11, 13; 5:10-12, 7:65-8:8</p> <p>U.S. Patent No. 7,791,818</p> <p>U.S. Patent No. 8,279,532</p> <p>U.S. Patent No. 8,665,533</p> <p>U.S. Patent No. 8,767,314</p> <p>Largan objects to Samsung's reliance on Academic Press Dictionary of Science and Technology, 1667 (1992) as contrary to the requirements of L.P.R. 4.1(a) and 4.1(c). These</p>	<p>request seeking its validity positions.</p>	<p>application, Taiwanese Patent Application 96130044, submitted 12/27/2007, the examiner's non-final rejection dated 4/1/2010, the amendment and arguments dated 6/29/2010, the examiner's non-final rejection dated 9/15/2010; the amendment and arguments dated 12/8/2010, and the notice of allowability and reasons for allowance dated 12/23/2010.</p> <p>'807 Patent at</p>

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>aspheric, and the third lens element is formed with at least one inflection point.</p> <p><u>'747 Patent</u></p> <p>7. A thin type optical lens system for taking image comprising three lens elements with refractive power, from the object side to the image side:</p> <p>a first plastic lens element with positive refractive power having a convex aspheric object-side surface and a convex aspheric image-side surface;</p> <p>an aperture stop;</p> <p>a second plastic lens element with negative refractive power having a concave aspheric object-side surface and a convex aspheric image-side surface;</p> <p>a third plastic lens element with negative refractive power having a convex aspheric object-side surface and a concave aspheric</p>			<p>documents were produced to Largan less than 12 hours before this filing was due to the Court. Largan further objects to Samsung's use of any other documents that were produced only hours ago, and which Largan has not had a sufficient opportunity to review.</p>		<p>4:67–5:3; 7:47–50; 7:60–65; 8:13–32; 9:55–10:6; 11:19–37; 12:48–66; 14:12–30; 15:42–60; Figures 13–25; Claims 2 & 22.</p> <p>'807 File History: the certified copy of foreign priority application, Taiwanese Patent Application 99106717, submitted 7/13/2010, and the notice of allowability and reasons for allowance dated 2/15/2012.</p> <p>'291 Patent at 7:16–48,</p>

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>image-side surface, and the third lens element being formed with at least one inflection point;</p> <p>wherein an Abbe number of the first lens element is V1, an Abbe number of the second lens element is V2, an Abbe number of the third lens element is V3 and they satisfy the relation:</p> $(V1+V3)/2-V2>20$ <p>a tangential angle of an image-side surface of the third lens element at a position of its effective optical diameter is ANG32, and it satisfies the relation:</p> $ANG32<-10 \text{ deg.}$ <p>8. A thin type optical lens system for taking image comprising three lens elements with refractive power, from the object side to the image side:</p> <p>a first plastic lens element with positive refractive power having a</p>					<p>11:21–52, 13:48–14:49, 17:12–43, 19:46–20:44, 23:1–33, 25:33–64, 27:61–29:4, Tables 1, 3, 5, 7, 9, 11, 13, 15.</p> <p>'860 Patent at 7:65–8:3, 8:21– 51, 10:16–37, 11:46–12:9, 13:18–48, 14:57–15:20, 16:28–58, 17:66–18:29, and Tables. 1, 3, 5, 7, 9, 11, 13.</p> <p>'190 Patent at 6:39–40, Figures 7, 9, 11,</p> <p>'191 Patent at 6:39–40, Figures 7, 9, 11,</p>

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>convex aspheric object-side surface and a convex aspheric image-side surface;</p> <p>an aperture stop;</p> <p>a second plastic lens element with negative refractive power having a concave aspheric object-side surface and a convex aspheric image-side surface;</p> <p>a third plastic lens element with negative refractive power having a convex aspheric object-side surface and a concave aspheric image-side surface, and the third lens element being formed with at least one inflection point;</p> <p>wherein a height of the object-side surface of the third lens element at a position of its effective diameter is SAG31, and it satisfies the relation:</p> <p>SAG31<0.2 mm.</p> <p><u>'807 Patent</u></p>					<p>Academic Press Dictionary of Science and Technology, 1667 (1992), SAM-LAR00008631–SAM-LAR00008633.</p> <p>Samsung provided a copy of the relevant section of the Academic Press Dictionary of Science and Technology, 1667 (1992) to Largan on 8/28/2014 in response to issues raised by Largan during the meet and confer process.</p> <p>Samsung objects to Largan's</p>

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>2. The imaging lens assembly according to claim 1, wherein the second lens element has a concave object-side surface and a convex image-side surface, is made of plastic material, and has at least one inflection point formed on the object-side and image-side surfaces.</p> <p>22. The imaging lens assembly according to claim 20, wherein the first lens element, the second lens element, and the third lens element are made of plastic material, a distance on the optical axis between the first lens element and the second lens element is T12, the focal length of the imaging lens assembly is f, and they satisfy the relation: $1.35 < (T12/f) * 10 < 1.85$.</p> <p><u>'291 Patent</u></p> <p>1. A photographing optical lens assembly comprising, in order from an object side to an image side:</p>					<p>purported reliance on U.S. Patent No. 7,791,818, U.S. Patent No. 8,279,532, and U.S. Patent No. 8,665,533. Contrary to the requirements of L.P.R. 4.1(a) and 4.1(c), Largan first disclosed these references less than 12 hours before this filing was due to the Court.</p>

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>a first lens element with positive refractive power having a convex object-side surface;</p> <p>a second lens element with negative refractive power;</p> <p>a third lens element;</p> <p>a fourth lens element; and</p> <p>a fifth lens element having a concave image-side surface and made of plastic material, wherein the fifth lens element has at least one inflection point formed on at least one of the object-side surface and the image-side surface thereof;</p> <p>wherein a focal length of the photographing optical lens assembly is f, a focal length of the first lens element is f_1; the photographing optical lens assembly further comprises an aperture stop and an image sensor, wherein a distance on the optical axis between the aperture stop and the image plane is SL; a</p>					

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	<p>distance on the optical axis between the object-side surface of the first lens element and the image plane is TTL, when the incident angle θ_1 of the light is 36 degrees and the light passes through the center of the aperture stop, the vertical distance from the optical axis to the intersection point of the light and the image-side surface of the fifth lens element is Y_{c1}, the image sensor is located on the image plane, a half of a diagonal length of an effective pixel area of the image sensor is $ImgH$, and they satisfy the following relationships:</p> <p>$0.7 < f/f_1 < 2.0$;</p> <p>$0.7 < SL/TTL < 1.2$;</p> <p>and</p> <p>$0.3 < Y_{c1}/ImgH < 0.9$.</p> <p>3. The photographing optical lens assembly of claim 1, wherein the fourth lens element is made of plastic material, and the fourth</p>					

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>lens element has a concave object-side surface and a convex object-side surface, and the object-side surface and the image-side surface of the fourth lens element are aspheric.</p> <p><u>'860 Patent</u></p> <p>2. The optical lens system according to claim 1, wherein the fourth lens element has a concave object-side surface and a convex image-side surface, at least one of the object-side and image-side surfaces of the fourth lens element is aspheric, and the fifth lens element is made of plastic.</p> <p>18. The optical lens system according to claim 17, wherein the fourth lens element has a concave image-side surface and a convex image-side surface, at least one of the object-side and image-side surfaces of the fourth lens element is aspheric, and the fifth lens element is made of plastic.</p>					

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
7	<p>7. A thin type optical lens system for taking image comprising three lens elements with refractive power, from the object side to the image side:</p> <p>a first plastic lens element with positive refractive power having a convex aspheric object-side surface and a convex aspheric image-side surface;</p> <p>an aperture stop;</p> <p>a second plastic lens element with negative refractive power having a concave aspheric object-side surface and a convex aspheric image-side surface;</p> <p>a third plastic lens element with negative refractive power having a convex aspheric object-side surface and a concave aspheric image-side surface, and the third lens element being formed with at least one inflection point;</p> <p>wherein an Abbe number of the first lens element is V1, an Abbe</p>	'747 Patent, Claims 7 and 8	The '747 Patent is no longer asserted pursuant to Largan's Preliminary Election of Asserted Claims, which was due and served today.	The '747 Patent is no longer asserted pursuant to Largan's Preliminary Election of Asserted Claims, which was due and served today.	<p>Indefinite</p> <p>This term, viewed in light of the specification and prosecution history, fail to inform those skilled in the art about the scope of the invention with reasonable certainty. <i>Nautilus, Inc. v. Biosig Instruments, Inc.</i>, 572 U.S. ___, slip op. at 11 (2014).</p> <p>Pursuant to P.L.R. 4.2(b), Samsung states that the construction of this claim term may impact its non-infringement or invalidity arguments. However, Largan has not served proper infringement contentions or any substantive response to</p>	Samsung identifies the entirety of the specification and file history of the '747 patent, because claims 7 and 8, when "read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." Samsung further identifies the following specific citations as supporting its

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>number of the second lens element is V2, an Abbe number of the third lens element is V3 and they satisfy the relation:</p> $(V1+V3)/2-V2>20$ <p>a tangential angle of an image-side surface of the third lens element at a position of its effective optical diameter is ANG32, and it satisfies the relation:</p> $ANG32<-10 \text{ deg.}$ <p>8. A thin type optical lens system for taking image comprising three lens elements with refractive power, from the object side to the image side:</p> <p>a first plastic lens element with positive refractive power having a convex aspheric object-side surface and a convex aspheric image-side surface;</p> <p>an aperture stop;</p>				<p>Samsung's discovery request seeking its validity positions.</p>	<p>position:</p> <p>'747 Pat. Title; Abs.; 1:7-9; 1:11-15; 1:40-62; 2:7-13; 2:25-41; 2:47-54; 2:57-67; 3:1-10; 3:22-28; 3:31-37; 3:44-50; 3:61-67; 4:6-16; 4:32-37; 4:50-67; 5:1-19; 5:41-50; 6:23-28; 6:35-41; 6:43-46; 6:51-55; 7:1-4; 7:7-10; 7:16-8:9; 8:12-16; 9:1-9; 9:35-40; 9:46-50; 9:53-56; 9:61-65; 10:13-17; 10:21-24; 10:31-51; 10:55-61; 11:35-43; 12:35-40; 12:46-51;</p>

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>a second plastic lens element with negative refractive power having a concave aspheric object-side surface and a convex aspheric image-side surface;</p> <p>a third plastic lens element with negative refractive power having a convex aspheric object-side surface and a concave aspheric image-side surface, and the third lens element being formed with at least one inflection point;</p> <p>wherein a height of the object-side surface of the third lens element at a position of its effective diameter is SAG31, and it satisfies the relation:</p> <p>SAG31<0.2 mm.</p>					<p>12:53–56; 12:61–65; 13:10–13; 10:15–18; 10:23–54; 10:57–62; Figures 1, 3 & 5; Tables 1–7, cls. 1–8.</p> <p>'747 File History: the certified copy of foreign priority application, Taiwanese Patent Application 96130044, submitted 12/27/2007, the examiner's non-final rejection dated 4/1/2010, the amendment and arguments dated</p>

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
						6/29/2010, the examiner's non-final rejection dated 9/15/2010; the amendment and arguments dated 12/8/2010, and the notice of allowability and reasons for allowance dated 12/23/2010.
8	<p>2. The imaging lens assembly according to claim 1, wherein the second lens element has a concave object-side surface and a convex image-side surface, is made of plastic material, and has at least one inflection point formed on the object-side and image-side surfaces.</p> <p>20. An imaging lens assembly comprising, in order from an object side to an image side:</p> <p>a first lens element with positive refractive power having a convex</p>	807 Patent, Claims 2 and 20	<p>This term is not indefinite and should be given its plain and ordinary meaning, which is "at least one inflection point formed on at least one of the object-side and image-side surfaces".</p> <p>Pursuant to P.L.R. 4.2(b), Largan</p>	<p>'807 Patent at FIGs. 1, 3, 5, 7, 9, 11; 2:18-19; 3:11-12; 4:63-64; 6:2-3; 7:13-14; 8:29-31; 10:4-6; 11:25-27; 12:65-66; 14:29-30; 15:59-60.</p> <p>'807 FH at LAR-SAM-0000528-589.</p>	<p>Indefinite</p> <p>This term, viewed in light of the specification and prosecution history, fail to inform those skilled in the art about the scope of the invention with reasonable certainty. <i>Nautilus, Inc. v. Biosig Instruments, Inc.</i>, 572 U.S. ____, slip op. at</p>	<p>Samsung identifies the entirety of the specification and file history of the '807 patent, because claims 2 and 20, when "read in light of the specification delineating the patent, and the prosecution history, fail to</p>

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>object-side surface and a convex image-side surface;</p> <p>a second lens element with negative refractive power having a concave object-side surface and a convex image-side surface, at least one of the object-side and the image-side surfaces thereof being aspheric; and</p> <p>a third lens element with negative refractive power having a concave image-side surface, both of the object-side and image-side surfaces thereof being aspheric, at least one inflection point formed on the object-side and image-side surfaces; and wherein the imaging lens assembly further comprises an aperture stop disposed between the first lens element and the second lens element, and an electronic sensor for image formation; wherein there are three lens elements with refractive power; and wherein a focal length of the imaging lens assembly is f, a focal length of the second lens element is f_2, a radius</p>		<p>states that other than Samsung's indefiniteness argument, it is not presently aware of any non-infringement or invalidity argument that hinges upon the construction of this term. However, Samsung has not yet provided any substantive response to Largan's discovery requests seeking its non-infringement positions.</p>		<p>11 (2014).</p> <p>Pursuant to P.L.R. 4.2(b), Samsung states that the construction of this claim term may impact its non-infringement or invalidity arguments. However, Largan has not served proper infringement contentions or any substantive response to Samsung's discovery request seeking its validity positions.</p>	<p>inform, with reasonable certainty, those skilled in the art about the scope of the invention." Samsung further identifies the following specific citations as supporting its position:</p> <p>'807 Patent at 2:18–19; 3:11–14; 4:63–67; 5:59–6:3; 7:3–14; 8:13–32; 9:55–10:6; 11:19–37; 12:48–66; 14:12–30; 15:42–60; Figures 1, 3, 5, 7, 9, 11, 13–25; cls. 2, 12, & 20.</p>

No.	Complete Claim Language (with disputed terms in bold)	Patent / Asserted Claims	Largan's Proposed Construction	Largan's Evidence	Samsung's Proposed Construction	Samsung's Evidence
	<p>of curvature of the object-side surface of the first lens element is R1, a radius of curvature of the image-side surface of the first lens element is R2, an Abbe number of the first lens element is V1, an Abbe number of the second lens element is V2, a distance on the optical axis between the aperture stop and the electronic sensor is SL, a distance on the optical axis between the object-side surface of the first lens element and the electronic sensor is TTL, and they satisfy the following relations:</p> <p>$-0.70 < f/f2 < -0.24$;</p> <p>$-0.30 < R1/R2 < 0.00$;</p> <p>$31.0 < V1 - V2 < 45.0$;</p> <p>$0.75 < SL/TTL < 0.90$.</p>					<p>'807 File History: the certified copy of foreign priority application, Taiwanese Patent Application 99106717, submitted 7/13/2010, and the notice of allowability and reasons for allowance dated 2/15/2012.</p>